

# **SCDO DSS, DPS, INS, IOS, ISS, and CLS subsystem requirements changes based on RTM VERSION012696**

CCR to correct problems identified in NASA's Requirement Spec (DID 304) Rejection

Changes since original submittal:

- 1) change Req Type for S-CLS-01640 and S-DSS-04595 from functional to interface
- 2) change Virtual IMS link between IMS-1400#B and S-INS-00404 to S-DSS-21280 (Insert API)
- 3) removed the changes addressing dial-up access (IMS-0090, IMS-0110 RbRs and new C-ISS-01350, S-IOS-00730 L4s)
  - a) new C-ISS-01350, S-IOS-00730 L4s not added (Table 2)
  - b) RbR IMS-0090#A not changed (Table 3)
  - c) IMS-0090, IMS-0110 RbRs and C-ISS-01350, S-IOS-00730 not linked (Table 4)

Table 1 - Reference table for review of L4 changes and L4 to RbR link changes

RbR ID	RTM key	RbR Text	RbR Type	Interpretation	L4 ID	Rel	RT M Key	L4 Text	Clarification	Req Type
IMS-0545#B	5139	The IMS shall provide the capability to search a products processing history.	functional		<u>S-DSS-03210</u>	A	3447	The SDSRV CI shall be capable of receiving Production History <u>and its associated metadata.</u>		<u>functional interface</u>
IMS-0545#B					<u>S-DSS-04670</u>	A	3549	The SDSRV CI shall support Inventory searches based on the Core Inventory Metadata.		functional
IMS-1400#B	5348	The Virtual IMS Information Management software shall operate with a local data base using an ECS supported DBMS provided by the SCF, thereby facilitating the process of importation of the local data base into the ECS.	interface		<u>S-DSS-21280</u>	B	8910	The SDSRV CI shall provide application programming interfaces (APIs) to support Insert Requests.		functional
IMS-1710#B	5385	The IMS shall provide the capability to produce reports that correlate science data to associated: a. Calibration data b. Navigation data c. Instrument engineering data	functional		<u>S-DSS-03210</u>	A	3447	The SDSRV CI shall be capable of receiving Production History <u>and its associated metadata.</u>		<u>functional interface</u>
IMS-1720#A	5570	The IMS shall provide the capability to produce reports that relate data sets to: a. Processing algorithms used for data generation at the PGS b. Software used for data generation at the PGS c. Parameters used for data generation at the PGS d. Data recipients	functional		<u>S-DSS-30270</u>	A	3837	The DDIST CI shall log the following to the Distribution Activity Log, for each Media Distribution Request: User Identifier, Media Identifiers, Media Type/Form Factor, and the Distribution Size.		functional

IMS-1720#A					<u>S-DSS-30280</u>	A	3838	The DDIST CI shall log the following to the Distribution Activity Log, for each Electronic Distribution Request: User Identifier, Data Destination, and the Distribution Size.		functional
IMS-1720#A					<u>S-DSS-30288</u>	A	3839	The DDIST CI shall forward the Distribution Activity Log entries to the SMC.		functional
IMS-1720#A					<u>S-DSS-30290</u>	A	3840	The DDIST CI shall provide operations staff with the capability to display the Distribution Activity Log.		functional
IMS-1720#B	5386	The IMS shall provide the capability to produce reports that relate data sets to: a. Processing algorithms used for data generation at the PGS b. Software used for data generation at the PGS c. Parameters used for data generation at the PGS d. Data recipients	functional		<u>S-DSS-30270</u>	A	3837	The DDIST CI shall log the following to the Distribution Activity Log, for each Media Distribution Request: User Identifier, Media Identifiers, Media Type/Form Factor, and the Distribution Size.		functional
IMS-1720#B					<u>S-DSS-30280</u>	A	3838	The DDIST CI shall log the following to the Distribution Activity Log, for each Electronic Distribution Request: User Identifier, Data Destination, and the Distribution Size.		functional
IMS-1720#B					<u>S-DSS-30288</u>	A	3839	The DDIST CI shall forward the Distribution Activity Log entries to the SMC.		functional
IMS-1720#B					<u>S-DSS-30290</u>	A	3840	The DDIST CI shall provide operations staff with the capability to display the Distribution Activity Log.		functional
PGS-0440#B	4751	The PGS shall accept from the DADS L0-L4 data products. Received information shall contain at a minimum: a. Product identification b. L0-L4 data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	B: AM-1	<u>S-DPS-30900</u>	B	8680	The PRONG CI shall provide to the SDP Toolkit EDOS-generated L0 PDS as header and quality parameters all contained in the same physical file as the L0 telemetry packets.		functional

PGS-0440#B					S-DPS-30910	B	8681	The PRONG CI shall provide to the SDP Toolkit EDOS-generated L0 PDS containing header information as specified in the EDOS-ECS ICD.		functional
PGS-0440#B					S-DPS-30920	B	8682	The PRONG CI shall provide to the SDP Toolkit EDOS-generated L0 PDS containing quality information as specified in the EDOS-ECS ICD.		functional
PGS-0440#B					S-DPS-31030	B	8684	The PRONG CI shall provide, at a minimum, the following metadata information to the SDP Toolkit with EDOS-generated L0 data: a. Actual start time of staged L0 data b. Actual end time of staged L0 data c. Number of physical L0 data files staged d. Start time of L0 data as requested by EOS investigators through the planning/processing system e. End time of L0 data as requested by EOS investigators through the planning/processing system f. APID of each L0 data file g. Orbit number or orbit number range of the staged L0 data file		functional
PGS-0450#B	4755	The PGS shall accept from the DADS ancillary data sets. Received information shall contain at a minimum: a. Product identification b. Ancillary data set c. Metadata required for processing d. Current date and time e. DADS identification	functional	B: AM-1	S-DPS-30710	B	8677	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for EOS-AM processing: a) time range b) orbit number range c) platform		functional

PGS-0500#B	4875	The PGS shall have the capability to generate Level 1 through 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists.	functional		<u>S-DPS-30710</u>	B	8677	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for EOS-AM processing: a) time range b) orbit number range c) platform		functional
PGS-1015#B	4932	The PGS shall provide ancillary data access subroutines that provide Standard Product software access to ephemeris data (e.g., solar, lunar, and satellite ephemeris ), Earth rotation data, and time and position measurement data. These subroutines shall perform operations such as: a. Interpolation b. Extrapolation c. Coordinate system conversion	functional		<u>S-DPS-30710</u>	B	8677	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for EOS-AM processing: a) time range b) orbit number range c) platform		functional
PGS-1130#A	4252	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions	functional	A: CERES, LIS Metadata = Product ID, QA results, Product Storage and Processing Instructions.	<u>S-CLS-01630</u>	A		<u>The DESKT CI shall provide a GUI to allow SCFs to request a QA metadata update with update data.</u>		<u>functional</u>
PGS-1130#A					<u>S-CLS-01640</u>	A		<u>The DESKT CI shall provide QA metadata updates to the SDSRV CI.</u>		<u>functional</u>
PGS-1130#A					<u>S-DSS-04595</u>	A		<u>The SDSRV CI shall be capable of receiving QA metadata updates from the DESKT CI</u>		<u>functional</u>
PGS-1130#A					<u>S-DSS-04596</u>	A		<u>The SDSRV shall provide the capability to allow DAAC operations personnel to approve the QA metadata update.</u>		<u>functional</u>
PGS-1130#A					<u>S-DSS-04590</u>	A	3541	The SDSRV CI shall provide services to modify the existing Inventory		functional

PGS-1130#B	4982	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions	functional		<u>S-CLS-01630</u>	<u>A</u>		The DESKT CI shall provide a GUI to allow an SCF to request a QA metadata update with update data.		<u>functional</u>
PGS-1130#B					<u>S-CLS-01640</u>	<u>A</u>		The DESKT CI shall provide QA metadata updates to the SDSRV CI.		<u>interface</u>
PGS-1130#B					<u>S-DSS-04595</u>	<u>A</u>		The SDSRV CI shall be capable of receiving QA metadata updates from the DESKT CI		<u>interface</u>
PGS-1130#B					<u>S-DSS-04596</u>	<u>A</u>		The SDSRV shall provide the capability to allow DAAC operations personnel to approve the QA metadata update.		<u>functional</u>
PGS-1130#B					<u>S-DSS-04590</u>	<u>A</u>	3541	The SDSRV CI shall provide services to modify the existing Inventory		functional
SDPS0091#B	5105	The SDPS shall receive a quality report that is generated and transmitted by the PIs or the other science users, and appended to the data products being archived by the SDPS.	functional	B: AM-1	<u>S-DSS-10100</u>	<u>A</u>	3586	The DDSRV CI shall be capable of receiving references to results of science data quality assessments of EOS data		functional
SDPS0091#B					<u>S-DSS-10130</u>	<u>A</u>	3589	The DDSRV CI shall be capable of receiving other documents relevant to quality assessment of EOS data		functional

Table 2 - LEVEL\_4 requirements changes

<b>L4 ID</b>	<b>Rel</b>	<b>RT M Key</b>	<b>L4 Text</b>	<b>Clarification</b>	<b>Req Type</b>
<u>S-CLS-01640</u>	A	<u>new</u>	<u>The DESKT CI shall provide QA metadata updates to the SDSRV CI.</u>		<u>interface</u>
<u>S-DSS-03210</u>	A	3447	<u>The SDSRV CI shall be capable of receiving Production History and its associated metadata.</u>		<u>functional interface</u>
<u>S-DSS-04595</u>	A	<u>new</u>	<u>The SDSRV CI shall be capable of receiving QA metadata updates from the DESKT CI</u>		<u>interface</u>
<u>S-DSS-04596</u>	A	<u>new</u>	<u>The SDSRV shall provide the capability to allow DAAC operations personnel to approve the QA metadata update.</u>		<u>functional</u>
<u>S-IOS-00730</u>	A	<u>new</u>	<u>The ADSRV CI shall allow advertisements of services that can be accessed via the WWW.</u>		<u>functional</u>

Table 3 - REQ\_BY\_REL requirements changes (no change afterall)

<b>RbR ID</b>	<b>RTM key</b>	<b>RbR Text</b>	<b>RbR Type</b>	<b>Interpretation</b>

Table 4 - Links to be added between REQ\_BY\_REL and LEVEL\_4

<b>RbR ID</b>	<b>L4 ID</b>
IMS-0545#B	S-DSS-03210
IMS-0545#B	S-DSS-04670
IMS-1400#B	S-DSS-21280
IMS-1710#B	S-DSS-03210
IMS-1720#A	S-DSS-30270
IMS-1720#A	S-DSS-30280
IMS-1720#A	S-DSS-30288
IMS-1720#A	S-DSS-30290
IMS-1720#B	S-DSS-30270
IMS-1720#B	S-DSS-30280
IMS-1720#B	S-DSS-30288
IMS-1720#B	S-DSS-30290
PGS-0500#B	S-DPS-30710
PGS-1015#B	S-DPS-30710
PGS-1130#A	S-CLS-01630
PGS-1130#A	S-CLS-01640
PGS-1130#A	S-DSS-04595
PGS-1130#A	S-DSS-04596
PGS-1130#A	S-DSS-04590
PGS-1130#B	S-CLS-01630
PGS-1130#B	S-CLS-01640
PGS-1130#B	S-DSS-04595
PGS-1130#B	S-DSS-04596
PGS-1130#B	S-DSS-04590
SDPS0091#B	S-DSS-10100
SDPS0091#B	S-DSS-10130

Table 5 - Links to be deleted between REQ\_BY\_REL and LEVEL\_4

<b>RbR ID</b>	<b>L4 ID</b>
PGS-0440#B	S-DPS-30900
PGS-0440#B	S-DPS-30910
PGS-0440#B	S-DPS-30920
PGS-0440#B	S-DPS-31030
PGS-0450#B	S-DPS-30710